REMARKS

Applicants wish to thank the Examiner for considering the present application. In the Office Action dated December 13, 2002, claims 1-11 are pending in the application. Claims 12-23 are added herein. Applicants have added no new matter. Applicants respectfully request the Examiner for reconsideration.

In the Office Action dated December 13, 2003, it is stated that "Examiner did not receive IDS #5 and therefore was unable to review the documents of applicant to be recorded. Please resubmit IDS #5 and if possible the postmark of IDS # 5". In accordance with this request, resubmitted herewith are copies of the Information Disclosure Statement cover letter dated January 30, 2002 (marked "Copy"), PTO Form-1449 marked "Copy" and copies of the references listed therein. Note that the Certificate of Mailing pursuant to the 37 CFR 1.8 is present on the transmittal. Also enclosed herewith is a copy of the return post card receipt listing these items with OIPE's date-stamp of February 25, 2002. The Office is requested to enter and consider this previously-submitted IDS.

Claim 1 stands rejected under 35 U.S.C. §102(e) as being anticipated by Chang (6,388,615). Applicants respectfully traverse.

The Applicants also note that a mistake appears to have been made in the Office Action which recites that claim 1 is rejected under §102(e) as being anticipated by Moon (6,173,352). The Applicants note that the cited passages correspond to the Chang reference and not the Moon reference.

Claim 1 is directed to a method for rapid acquisition of a subscriber that defines a coverage area as an arrangement of a plurality of cells wherein one of the plurality of cells includes a specific subscriber. The next step includes defining a partition of cell clusters. One of the cell clusters includes one of the plurality of cells that includes the specific subscriber. A beam is then formed that corresponds to the area of one of the cell clusters. The beam is then scanned to one of the cell clusters that includes the specific subscriber. The partitioning of the cells into progressively smaller cell clusters and zooming and scanning a beam to the progressively smaller clusters is performed until a location of the specific subscriber cell is determined. The partitioning, zooming and scanning features are performed until the location of the specific subscriber is determined. This method is a significant improvement over the raster-type scanning performed in Figure 1 of the present application.

The Examiner rejects claim 1 with respect to the *Chang* reference. Applicants respectfully submit that the *Chang* reference does not include each and every one of the elements of claim 1. The Examiner points to Col. 2, lines 20-23, and Fig. 19, for illustrating a coverage area having a plurality of cells with a specific subscriber. Applicants agree that the *Chang* reference does show a plurality of cells in a coverage area. The Examiner points to Col. 1, lines 35-42, for the teaching of "defining a partition of cell clusters wherein one of the cell clusters includes the one of the plurality of cells that includes the specific subscriber." Applicants respectfully submit that no teaching or suggestion is provided by the *Chang* reference for cell clusters. The *Chang* reference recites in this passage that, "...there would be no need to form beams where no users are present except for a new acquisition beam that may scan or a big beam that may be used to zoom in." Applicants respectfully submit that this passage does not teach or suggest the method of rapid acquisition as taught by the present invention. The specific details of 'zooming in' are not taught or suggested in the *Chang* reference. More specifically, no teaching is provided for defining a partition of cell clusters. The *Chang* reference merely recites that a big beam may be used to zoom in. Col. 2, line 25, states that, "The system is equipped with a mechanism for detecting movement of the user from the first microcell to one of the immediately adjacent microcells." Further, Col. 2, line 40, states, "The user's position is detected with a global positioning system receiver, by measuring the strength of a signal received from the user, or by other suitable means." Consequently, it is assumed that the user position is known or is easily determined by some suitable means. The "big beam" as recited at the end of Col. 1 may be used to zoom in when a new user is present. At most, the *Chang* reference defines a coverage area and directing a beam to a user in a specific cell when the user's position is detected. This passage does not teach, "defining a partition of cell clusters wherein one of the cell clusters includes the one of the plurality of cells that includes the specific subscriber." This step in the present invention groups the cells into cell clusters having more than one cell.

As further recited in claim 1, the beam is formed that corresponds to an area of one of the cell clusters. Then, the beam is scanned to one of the cell clusters that includes the specific subscriber. Thus, the cell clusters are narrowed to the specific cluster. Although the *Chang* reference forms a beam that may have more than one cell therein, such as the "big beam", cell clusters as defined in step (b) are not formed. As a result, the step of scanning the

beam to one of the cell clusters is also not taught or suggested. As mentioned above, the *Chang* reference teaches one coverage area in zooming in on one cell.

Each and every element of claim 1 is not taught in the *Chang* reference. Applicants therefore respectfully request the Examiner for reconsideration.

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Chang* in further view of *Diekelman* (5,555,444). *Diekelman* does not teach or suggest the missing elements of claim 1.

Claims 3-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable *Chang* in further view of *Houston* (6,272,317). Applicants respectfully traverse. Claims 3-7 are further limitations of claim 1. The *Chang* reference has several missing elements that are also not recited in the *Houston* reference. Applicants therefore respectfully request the Examiner to reconsider the rejection of claims 3-7 for the same reasons set forth in claim 1.

Claims 8 and 10 stand rejected as being unpatentable over *Chang* in further view of *Lo* (6,240,072). Applicants respectfully traverse.

Claim 8 is directed to an apparatus for rapid acquisition that includes a stratospheric transponder platform and a ground station. The ground station is used to form the beams of the present invention. Claim 8 recites that the ground station comprises a beam former for at least one of "zooming the beam to form a beam corresponding to an area of a cell cluster within a partition containing a plurality of cell clusters and scanning the beam to form the beam aimed at one of the plurality of cell clusters that includes a specific subscriber wherein each of the plurality of cell clusters includes at least one of a plurality of cells." Applicants respectfully submit that cell clusters as recited above are not taught or suggested by the *Chang* reference. At most, *Chang* teaches one group of cells is formed within the coverage area. Therefore, the cell cluster limitation of claim 8 is not taught or suggested in the *Chang* reference.

The *Lo* reference is used for teaching a ground station having a beam former. Applicants agree that the *Lo* reference teaches that the beam former may be either on the ground or on the satellite as recited in Col. 3, lines 19 and 20. However, the specific cell clustering aspect as recited in claim 8 is not taught or suggested.

Claims 10 and 11 are further limitations of claim 8 and are believed to be allowable for the same reasons as set forth above.
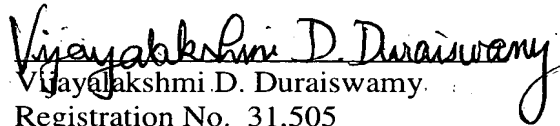
Claim 9 stands rejected over *Chang* in view of *Lo* in further view of *Diekelman*. Applicants respectfully submit that the *Chang* reference does not teach or suggest the cell clustering as recited in the present invention. Applicants therefore respectfully request the Examiner for reconsideration of the rejection of claim 9 as well.

New claims 12-23 are also believed to be allowable for the same reasons set forth above.

In light of the above amendments and remarks, Applicants submit that all rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments, which would place the application in better condition for allowance, he is respectfully requested to call the undersigned attorney.

Also submitted herewith is a new Supplemental Information Disclosure Statement cover letter with authorization to charge the necessary IDS fee, PTO-1449 and copies of references cited therein.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Claims:

8. (Amended) An apparatus for rapid acquisition of a specific subscriber comprising:

a stratospheric transponder platform having an antenna for one of transmitting and receiving a beam; and

a ground station coupled to the stratospheric transponder platform wherein the ground station comprises a beamformer for [at least one of] zooming [the beam to form] a beam corresponding to an area of a cell cluster within a partition containing a plurality of cell clusters and scanning the beam to [form a beam aimed] aim at one of the plurality of cell clusters that includes [a] the specific subscriber wherein each of the plurality of cell clusters includes at least one of a plurality of cells.

12. (New) A method for rapid acquisition of a specific subscriber comprising the following steps:

(a) defining a coverage area as an arrangement of a plurality of cells wherein one of the plurality of cells is a specific subscriber cell including the specific subscriber;

(b) partitioning the plurality of cells into cell clusters each formed from more than one of the plurality of cells wherein one of the cell clusters includes the specific subscriber cell;

(c) forming a beam that corresponds to an area of one of the cell clusters;

(d) scanning the beam to the one of the cell clusters that includes the specific subscriber;

(e) partitioning the one of the cell clusters that includes the specific subscriber into a second plurality of cell clusters;

(f) zooming the beam to form a beam that corresponds to an area of one of the second plurality of cell clusters; and

(g) scanning the beam to one of the second plurality of cell clusters that includes the specific subscriber.

(h) determining a location of the specific subscriber cell in response to

scanning the beam to one of the second plurality of cell clusters that includes the specific subscriber.

13. (New)   The method of claim 12 wherein partitioning the plurality of cells comprises partitioning the plurality of cells in response to a traffic model.

14. (New)   The method of claim 12 wherein partitioning the plurality of cells into cell clusters comprises partitioning the plurality of cells into clusters each having an equal number of cells.

15. (New)   A method for rapid acquisition of a specific subscriber comprising:

defining a coverage area having a plurality of cells wherein one of the plurality of cells includes the specific subscriber generating a locating signal;

defining at least a first cell cluster and second cell cluster within the plurality of cells;

zooming a beam to a first size;

identifying the first cell cluster when the locating signal is received therefrom;

partitioning the first cell cluster into a third cell cluster and a fourth cell cluster;

zooming the beam to a second size;

thereafter, confirming the specific subscriber is within the third cell cluster in response to the locating signal; and;

partitioning and zooming until a location of the specific subscriber is determined.

16. (New)   The method of claim 15 wherein zooming a beam to a first size comprises zooming a beam to a first size corresponding to an area of the first cell cluster or the second cell cluster.

17. (New)   The method of claim 15 wherein zooming the beam to a second size comprises zooming a beam to a second size corresponding to an area of the third cell

cluster or the fourth cell cluster.

18. (New)   The method of claim 15 wherein partitioning the plurality of cells comprises partitioning the plurality of cells into an equal number.

19. (New)   A method for rapid acquisition of a specific subscriber comprising:

defining a coverage area having a plurality of cells wherein one of the plurality of cells includes a specific subscriber cell having a specific subscriber therein; and

partitioning the cells into progressively smaller clusters; and

zooming and scanning a beam to the progressively smaller clusters until a location of said specific subscriber cell is determined.

20. (New)   A method for rapid acquisition of a specific subscriber comprising:

defining a coverage area having a plurality of cells wherein one of the plurality of cells includes a specific subscriber generating a locating signal;

defining a first cell cluster from the plurality of cells according to a traffic model;

zooming a beam to a first size corresponding to the first cell cluster;

confirming that the specific subscriber is within the first cell cluster;

partitioning the first cell cluster into a second cell cluster and a third cell cluster;

zooming the beam to a second size;

thereafter, confirming that the specific subscriber is within the third cell cluster; and

partitioning and zooming until a location of the specific subscriber cell is determined.

21. (New)   The method of claim 20 wherein confirming that the specific subscriber is within the first cell cluster comprises receiving the locating signal from the user.

22. (New)   The method of claim 20 wherein zooming the beam to a second size comprises zooming the beam to a second size corresponding to the third cell cluster.

23. (New)   A method for rapid acquisition of a specific subscriber comprising:

defining a coverage area having a plurality of cells wherein one of the plurality of cells includes a specific subscriber having a first acquisition code address and a second acquisition code address associated therewith;

performing a first acquisition method and a second acquisition method in parallel until a location of a specific subscriber cell is determined, wherein

performing a first acquisition method comprises

using a first acquisition code address, partitioning the cells into first progressively smaller clusters; and

zooming and scanning a first beam to the first progressively smaller clusters; and

performing a second acquisition method comprises

using a second acquisition code address, partitioning the cells into second progressively smaller clusters according to a traffic model; and

zooming and scanning a second beam to the second progressively smaller clusters.